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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,640	12/28/2000	Duane Scott Dewald	TI-30205	6977

23494 7590 04/22/2003

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EXAMINER

ROBINSON, MARK A

ART UNIT PAPER NUMBER

2872

DATE MAILED: 04/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Paper No. 15

Application Number: 09/750,640  
Filing Date: December 28, 2000  
Appellant(s): DEWALD, DUANE SCOTT

Charles A. Brill  
For Appellant

EXAMINER'S ANSWER

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APR 23 2003  
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APR 23 2003  
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This is in response to the appeal brief filed 24 February 2002.

Art Unit: 2872

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

Appellant's brief includes a statement that claims 1, 7, 16 and 19 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

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**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

5,335,158

Kaplan

8-1994

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1,2,5,6 and 15-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaplan.

Kaplan shows in fig. 1 an integrating rod including an elongated body(12) with an entrance face which has a circular transmissive aperture(34) centered within a mirrored portion(24) allowing light to pass into the body and operable to reflect light passing through the body back to the entrance face.

Kaplan teaches in column 4 the integrator to be of either hollow or solid construction (made of glass), thus operating by either reflection or total internal reflection.

Claims 3,4,7 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaplan.

With respect to claims 3,4 and 10-13, Kaplan does not show the particular geometry for the entrance aperture or elongated body as found in these claims. However, integrators having such

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configurations are well known in the art, and use thereof in Kaplan's device would have been obvious to the ordinarily skilled artisan at the time of invention depending upon the desired configuration or shape of the output beam.

With respect to claim 7, although not taught by Kaplan, use of a known metal layer in Kaplan's device would have been obvious to the ordinarily skilled artisan at the time of invention in order to increase the reflectivity of the body's interior.

***(11) Response to Argument***

Appellant has argued that Kaplan does not show "a mirrored entrance aperture" as set forth in claim 1, specifically objecting to the examiner's interpretation of Kaplan's surface 24 as a "mirrored" surface.

However, Kaplan teaches the surface in question to be "highly reflective." Since this surface is "highly reflective," it is seen to satisfy the definition of "reflecting a large fraction of incident light" as set forth in the dictionary citation provided by appellant. Therefore, the surface of Kaplan is seen to meet the limitation of a "mirrored portion."

Appellant has also argued that item 12 of Kaplan is not an elongated body, and thus Kaplan does not meet the limitation concerning an "elongated body."

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In response, the examiner has provided two annotated copies of Kaplan fig. 2, labeled to show the primary structural features defined in claim 1. Appendix A shows that the structure generally centered around item 12 to be an "elongated body," i.e. an aggregate of matter (this is shown in Appendix A as the structure inside the box labeled "elongated body"). Lacking a specific definition in appellant's specification, the term "elongated" simply requires one dimension to be longer than the other, and this is clearly shown in figure 2. Thus, Kaplan's aperture 34 is located at one end of the aggregate of matter (body) contained within the labeled box.

Further, the entire structure generally shown at item 14 in Kaplan fig. 2 may be considered as the "elongated body," and Appendix B includes structural features which are labeled to correspond to this interpretation. Note that the "entrance face" includes a surface at an external end of the "elongated body" (note the surface at the left end of fig. 2). This face includes an "entrance aperture" which allows light to enter the body, with the "entrance face" including a "mirrored portion" on the inside thereof (note that in this interpretation, the "entrance face" is thick and constitutes the area encompassed by the labeled portion shown in Appendix B). This allows light traveling back toward the "entrance face" to be reflected by the

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"mirrored portion" in a manner similar to that of the present invention.

Appellant has argued with respect to claim 7 that the examiner has not made a prima facie case of obviousness, specifically that there is no motivation or suggestion to include a metal layer on Kaplan's entrance face.

In response it should be noted that a motivation was put forth by the examiner in the rejection, i.e. that use of a metal layer on Kaplan's mirrored portion would increase the reflectivity of this portion and thus increase the amount of light produced by the device, and this motivation has not heretofore been specifically traversed. Since high light output or efficiency is one of the explicit goals of the Kaplan patent (note Kaplan's title), this modification of Kaplan's structure was seen to be an obvious one. Further, that metal layers will provide higher reflectivity than the material used by Kaplan may be evidenced by the fact that metal materials (and not white paint) are used in applications requiring the highest degree of mirror reflectivity, i.e. telescope mirrors, laser mirrors, etc.

Appellant has further argued with respect to claim 16 that Kaplan's item 12 is not a "solid transparent body."

In response, it should be noted that the elongated body is not considered to be limited to item 12 but rather the structure

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shown in the two Appendices provided by the examiner. These appendices show elongated bodies *including* item 12 as explained above. Further, as noted in the rejection, Kaplan teaches in column 4 a solid glass arrangement for the device which is seen to satisfy the requirement for a "solid" body. Thus, the limitations of claim 7 are seen to be met by Kaplan.

Appellant has argued with respect to claim 19 that Kaplan does not teach total internal reflection in the device.

In response, attention should be directed to Kaplan column 4 line 41 which teaches total internal reflection in the device.

For these reasons, it is believed that the rejections should be sustained.



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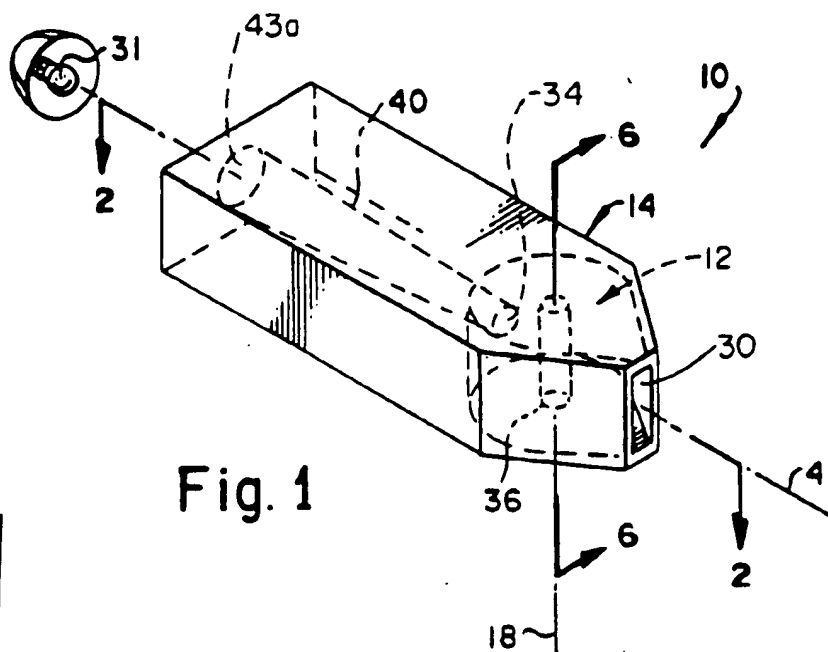
Respectfully submitted,

Mark Robinson  
April 16, 2003

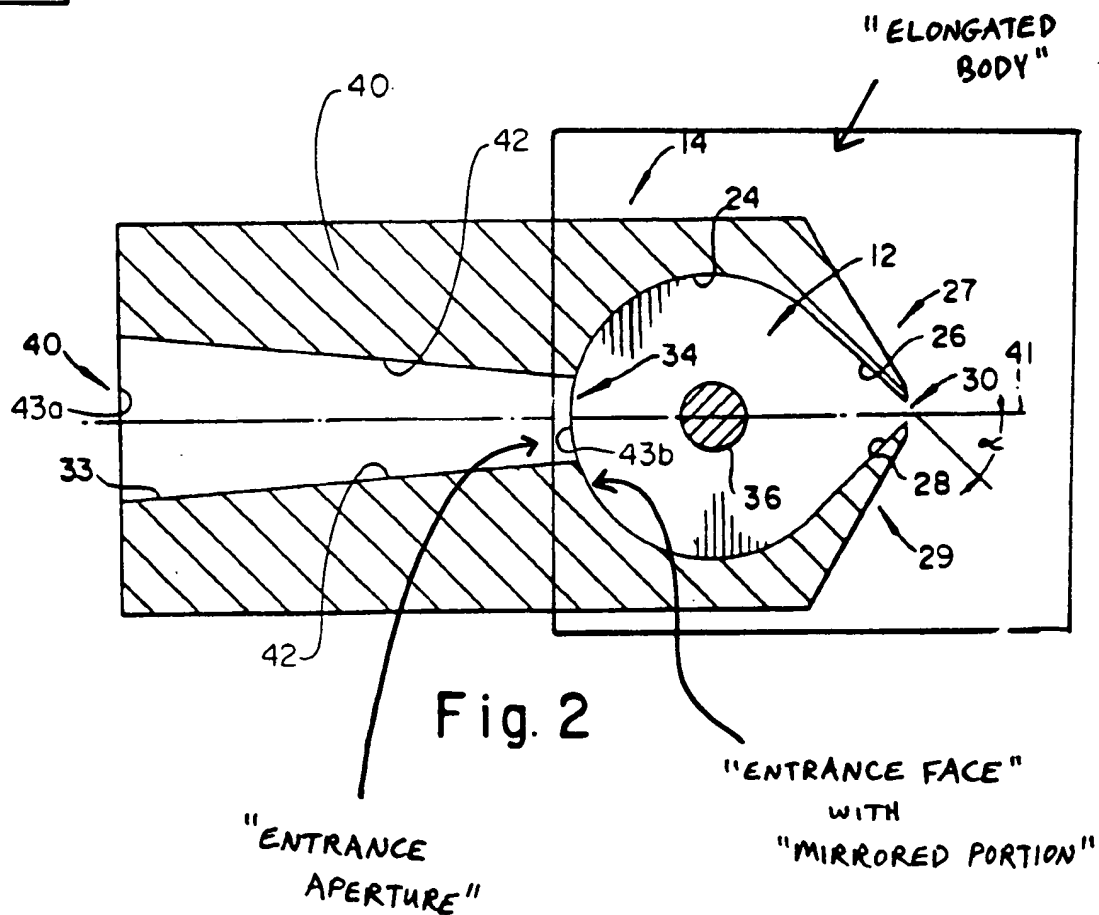
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APPENDIX  
A



APPENDIX  
B

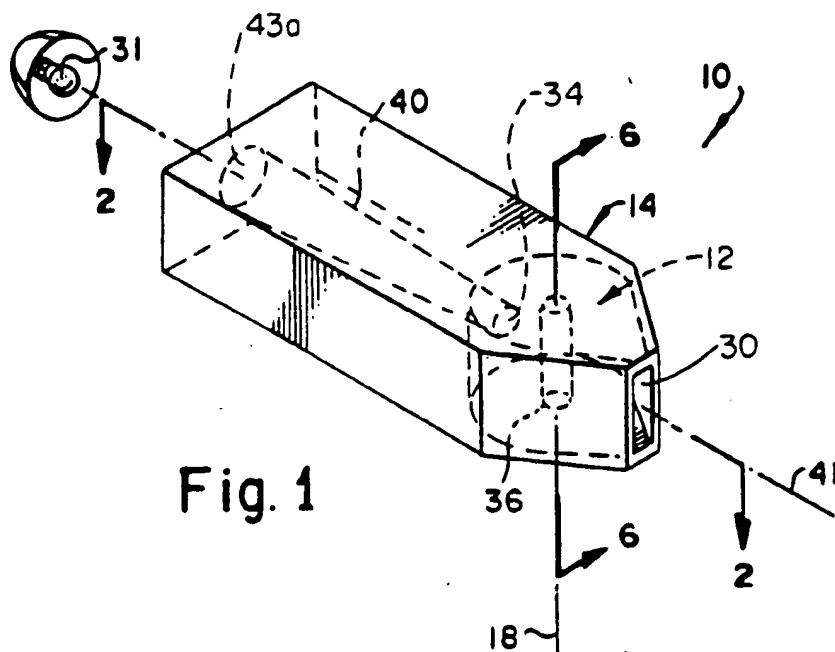


Fig. 1

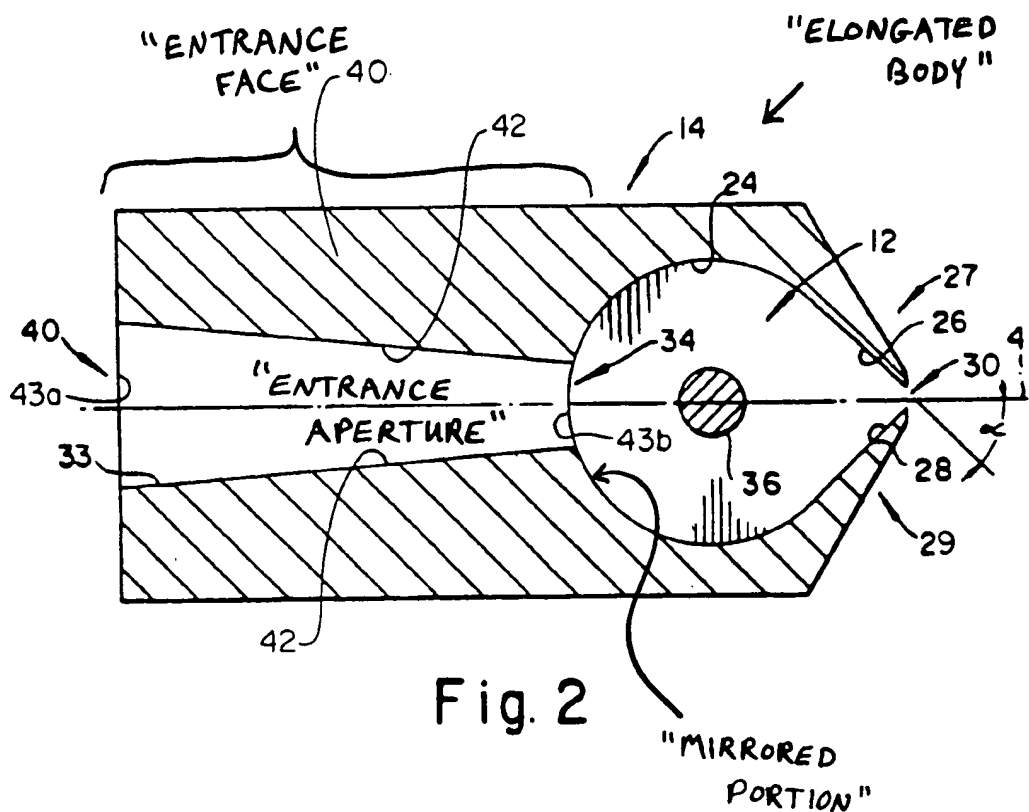


Fig. 2

"MIRRORED  
PORTION"